

REMARKS

Claims 12, 14, 16, 18 and 20 have been amended, Claim 11 has been canceled and replaced by new Claim 23, and Claim 21 has been canceled, so that Claims 12-20, 22 and 23 are currently pending. Reconsideration is respectfully requested.

Replacement drawing sheet 1 is submitted herewith in order to overcome the drawing objection in paragraph 1 on Office Action page 2. In particular, the legend "prior art" has been added in FIGUREs 1A and 1B. The drawing objection is therefore overcome.

The indication that Claims 12, 13, 16, 17, 21 and 22 recite allowable subject matter is noted with appreciation. In this regard, the limitations of Claim 21 have been incorporated into its parent Claim 20, and Claim 22 has been amended to depend from Claim 20. Accordingly, Claims 20 and 22 should now be in proper condition for allowance. Regarding Claims 12, 13, 16 and 17, Applicant has deferred rewriting these claims in independent form until the present amendment has been fully considered.

The specification objection in paragraph 2 of Office Action page 2 is respectfully tranversed. In particular, although paragraph 2 objects to the phrase "0_π phase conflict" as used throughout the application, paragraph 2 also notes that page 6 of the specification defines the phrase "0_π phase conflict". Inasmuch as it is a notoriously well known tenet of U.S. patent law that the patentee may be his own lexicographer, and inasmuch as the Office Action expressly admits that

the phrase "0_—π phase conflict" is in fact defined in the specification, Applicant respectfully requests withdrawal of the specification objection in paragraph 2 on Office Action page 2.

Regarding the claim objection in paragraph 3 on Office Action pages 2-3, Claim 11 has been replaced by new Claim 23, which is identical to Claim 11 as previously presented in the Amendment mailed on October 17, 2003, except that Claim 23 recites the phrase "0_—π phase conflict" that appeared in Claim 11 as originally presented upon initial filing of this application. For the same reasons discussed above with respect to the specification objection, Applicant submits that, as the Office Action admits, the phrase "0_—π phase conflict" is adequately defined. Accordingly, the claim objection in paragraph 3 on Office Action pages 2-3 is now believed overcome.

Claims 12, 14, 16 and 18 have been amended such that Claims 12-19 all now depend ultimately from Claim 23.

Turning now to the remaining issue as to patentability, Claims 12-19 and 23 recite that an alignment mark on a semiconductor wafer is aligned with a bright spot created on a mask by irradiating the mask. This exemplary feature of Claims 12-19 and 23 has not been found to be taught or suggested in the applied references, taken either individually or in combination.

More specifically, Muraki U.S. Patent No. 5,182,455 teaches the alignment of a reticle R and a wafer W, as illustrated generally in Figure 1. As discussed from line 35 of Muraki column 7 through line 2 of Muraki column 8,

the alignment process utilizes a beam spot created on a grating mark G_w , which grating mark is provided on the wafer W . In particular, the Muraki alignment process analyzes how the grating mark G_w reflectively diffracts the beams that form the beam spot on the grating mark G_w . The reflective diffraction pattern produced by G_w is used to determine the position of the beam spot relative to the grating mark G_w . So, the Muraki alignment process utilizes a grating mark provided on the wafer W , and a beam spot that is also created on the wafer W , specifically on the grating mark G_w .

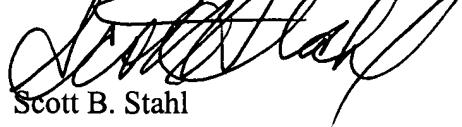
As mentioned above, Claims 12-19 and 23 recite that an alignment mark is provided on the semiconductor wafer and that a bright spot is created on the mask, which clearly contrasts with Muraki's use of a grating mark and a beam spot, both of which are provided on Muraki's wafer. Furthermore, the Muraki grating mark G_w is not an alignment mark as recited in Claims 12-19 and 23, and Muraki's above-described use of a reflective diffraction pattern produced by a grating mark with a beam spot created thereon is a wholly different alignment technique than the alignment of an alignment mark on a wafer and a bright spot on a mask, as recited in Claims 12-19 and 23.

Claims 12-19 and 23 distinguish patentably over Muraki, because Muraki fails to teach or suggest the aforementioned exemplary feature of Claims 12-19 and 23. Moreover, any combination of teachings in Muraki, Adams U.S. Patent No. 5,968,693 and Feldman U.S. Patent No. 4,037,969 fails to teach or suggest the aforementioned exemplary feature of Claims 12-19 and 23.

It is submitted in view of the foregoing that all pending claims are now in proper condition for allowance, and notice to that effect is respectfully solicited.

Any inquiries regarding this paper may be directed to the undersigned attorney at the telephone number listed below.

Respectfully Submitted,



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Enclosures: Replacement drawing sheet 1